HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY
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191—Acta Radiologica.

a. CLAESSEN, G.—" On echinococcus in the lung." XVI (5), 601-615. [1935.]

192—American Journal of Clinical Pathology.

a. WARWICK, M.—" The relationship between oxyuriasis and appendicitis." V (3), 238-248. [1935.]

193—American Journal of Hygiene.

a. BARLOW, C. H.—" Further studies of the revival, after drying of the snail hosts of the human schistosomes of Egypt." XXII (2), 376-391. [1935.]
b. JONES, T. L. & KINGSCOTE, A. A.—" Observations on ascaris sensitivity in man." XXII (2), 406-413. [1935.]
c. HUNNINEN, A. V.—" Studies on the life history and host-parasite relations of *Hymenolepis fraterna* (*H. nana*, var. *fraterna*, Stiles) in white mice." XXII (2), 414-443. [1935.]
d. PORTER, D. A.—" A comparative study of *Nippostrongylus muris* in rats and mice." XXII (2), 444-466. [1935.]
e. PORTER, D. A.—" Studies on the effect of milk diet on the resistance of rats to *Nippostrongylus muris*." XXII (2), 467-474. [1935.]

(193a) In a series of laboratory experiments Barlow has shown that *Bullinus contortus* can survive desiccation for 80 days to 4 months and *Planorbis boissyi* from 80 days to almost 6 months. Revival was artificially induced by the " pipette " method. Snails infected with Bilharzia succumb more quickly than the uninfected. Thousands of miles of canals, which are the ideal habitat for both species, show no infection at the end of the winter closures, which is a very real factor in the seasonality of infectivity. Mollusc eggs do not survive the winter closure of canals.

R.T.L.

(193b) Jones & Kingscote describe the symptoms of ascaris sensitivity in man which, starting at symptoms of hay fever finished with a chronic rhinitis and asthma. Prolonged contact with the worm appeared in some cases to lead to a desensitization. About 20% of subjects selected at random gave positive reactions to a scratch test with 5% saline extract of pig ascaris. They found that a positive reaction did not always indicate that previous infestation had occurred though a period of exposure seemed to be a necessary precursor.

P.A.C.

(193c) Hunninen finds that in infestations of *Hymenolepis fraterna* in mice the prepatent period is commonly 15 days but may vary from 14 to 25 days. Eggs may hatch anywhere in the intestine without having to pass first through the stomach. The cysticerci develop in the villi of the first half of the intestine, usually each villus containing a single cysticercus,

while the adults are limited to the terminal portion of the small intestine. The larval stage occupies about 102 hours but may extend to 144 hours, by which time they are all liberated into the lumen. A high degree of acquired immunity to superinfestation seems to be developed as a result of the presence of cysticerci while age immunity develops at the age of 5 months but would seem to disappear in old age. P.A.C.

(193d) Porter has compared rats and mice as hosts of *Nippostrongylus muris* and concludes that the mouse is a somewhat abnormal host for this worm. This is evidenced by the longer prepatent period, smaller percentage development, lower egg output and the shorter duration of the infection. Age resistance develops very early in the mouse while a distinct acquired resistance to re-infection occurs in both hosts and is of long duration. The loss of worms is rapid in the mouse, both sexes being passed in approximately equal numbers, but in rats the female worms are passed first. P.A.C.

(193e) Porter finds that rats fed on a diet of whole milk have their resistance to infestation with *Nippostrongylus muris* considerably reduced. This occurred whether he investigated the natural resistance to primary infections or the acquired resistance to re-infestation. He found further, that not all strains of the parasite are equally infective under identical conditions. P.A.C.

194—American Journal of Tropical Medicine. (Supplement.)

a. McKINLEY, E. B.—"A geography of disease. A preliminary survey of the incidence and distribution of tropical and certain other diseases." XV (5), Supplement, xxv+489 pp. [1935.]

195—Annaes Paulistas de Medicina e Cirurgia.

a. PESSÔA, S. B. & ALVES MEIRA, J.—"A eosinophilia sanguinea. IV Parte. Alguns dados experimentaes em ratos." XXIX (1), 33-71. [1935.]
b. SCHWENCK, J.—"Origem primaria do parasitismo." XXIX (3), 215-220. [1935.]

(195b) In an interesting discussion on the evolution of parasitism, Schwenck points out that in all the Phyla containing endoparasites are to be found free-living representatives, some or all of which are aquatic in habitat. He suggests that the original endoparasites were aquatic organisms which found congenial conditions in the intestine of the host, while the original ectoparasites were terrestrial organisms using the host primarily as a means of transportation. Parasitization of tissues is thus a later development. Those helminths which, as larvae, migrate via the blood stream may do so as a biological recapitulation of their ancestral aquatic life. B.G.P.

196—Annales de Parasitologie Humaine et Comparée.

a. PAVLOV, P.—"Recherches sur le cycle évolutif de *Metastrongylus elongatus* et de *Dictyocaulus filaria*." XIII (5), 430-434. [1935.]
b. BERGHE, L. VAN DEN.—"Sur l'existence de filaments latéraux sur la coque de l'oeuf de *Cystidicola farionis* Fischer 1798." XIII (5), 435-438. [1935.]

(196a) Experiments on pigs show that massive lung infection with *Metastrongylus elongatus* can be produced in 3 weeks by feeding with experi-

mentally infected *Lumbricus terrestris minor*, whereas attempts at direct infection failed. With *Dictyocaulus filaria* infection is direct. The infective larvae can live in a moist medium for 25 to 35 days. R.T.L.

197—Annales de la Société Belge de Médecine Tropicale.

a. VALCKE, G.—" Traitement de l'anguillulose par une cure combinée d'émétique et de violet de gentiane." XV (3), 387-390. [1935.]
b. VAN SLYPE, W.—" Recherches pathogéniques et thérapeutiques sur l'ankylostomiase." XV (3), 421-467. [1935.]

198—Annali di Ottalmologia e Clinica Oculistica.

a. SABA, V.—" Echinococco cerebrale e complicanze oculari." LXIII, 13-41. [1935.]

199—Annals of Internal Medicine.

a. GOLDSCHLAGER, A. I.—" Trichinosis. A report of eight cases with skin and precipitin tests." VIII (8), 939-950. [1935.]

200—Annals and Magazine of Natural History.

a. BAYLIS, H. A.—" Four new species of nematodes." (Ser. 10), XVI (93), 370-382. [1935.]

(200a) Brief systematic descriptions are given of *Mermis maroccano* n. sp. from a lake in the Moyen Atlas 6,700 ft. high, *Oxyspirura myzomelae* n. sp. from a honeyeater (*Myzomela* sp.) in the British Solomon Islands, *Metabronema truttae* n. sp. from a Welsh brown trout. Baylis is of opinion that *Pseudocystidicola* is synonymous with *Metabronema*. From a hedgehog in Uganda *Trichuris mettami* n. sp. is described, the first species to be recorded from an insectivore. R.T.L.

201—Annals of Surgery.

a. CUNNIFFE, E. R.—" Double echinococcus cyst of liver treated by marsupialization." CI (6), 1442-1447. [1935.]

202—Archiv für Dermatologie und Syphilis.

a. NEUBER, E.—" Beiträge zur Diagnose, Epidemiologie und Therapie der Filariase (*Filaria bancrofti*) auf Grund zweier Fälle." CLXXI (5), 515-525. [1935.]

203—Archiv für Kinderheilkunde.

a. BRÜNING, H.—" Zur Frage der Verwurmung mecklenburgischer Kinder." CIV (3), 170-173. [1935.]

204—Archives Internationales de Pharmacodynamie et de Thérapie.

a. COSTA, G. DA & HAMET, R.—" Action de la télépathine sur les nématodes et les cestodes." L, 237-240. [1935.]

(204a) Da Costa & Raymond-Hamet have measured the amplitude and frequency of contractions of *Ascaris lumbricoides* and *Taenia serrata*

when placed in solutions containing 0·1% of "telepathine," an alkaloid extracted from the Yaje plant. In both cases, the amplitude and frequency of contractions were increased very markedly by the presence of the drug. The increase persisted for several hours in the ascaris preparation, and for about 1-1½ hours, followed by paralysis, in the taenia preparation. R.H.H.

205—Archives of Neurology and Psychiatry.

a. DOLGOPOL, V. B. & NEUSTAEDTER, M.—"Meningo-encephalitis caused by *Cysticercus cellulosae*." XXXIII (1), 132-147. [1935.]

206—Archives of Ophthalmology.

a. KOFOID, C. A. & WILLIAMS, O. L.—"The nematode *Thelazia californiensis* as a parasite of the eye of man in California." XIII (2), 176-180. [1935.]
b. BRUCK, A. J.—"The applicability of the Krönlein operation for the removal of cysticercus of the posterior half of the eye." XIII (6), 1042-1050. [1935.]

(206a) The four known cases of *Thelazia* in man have all been recorded from China and diagnosed as *T. callipaeda*. Kofoid & Williams report, as *Thelazia californiensis* n. sp., 3 specimens from the eye of a physician living in Porterville, California. It is differentiated from *T. callipaeda* by the coarseness of the transverse cuticular striations, the number of genital papillae, viz., 6 or 7 preanal and 3 postanal pairs, and the position of the vulva posterior to the end of the oesophagus. R.T.L.

207—Archives of Pathology.

a. FAUST, E. C.—"Experimental studies on human and primate species of Strongyloides. IV. The pathology of Strongyloides infection." XIX (6), 769-806. [1935.]

(207a) Faust gives a detailed account of the lesions produced by the experimental infection of 62 dogs with *Strongyloides stercoralis* of human origin.

The cutaneous lesions following skin infection were unimportant. 29% of the dogs showed serious pulmonary damage. Those larvae which were confined in the smaller air passages usually metamorphosed into adolescent worms while some of the females invaded the bronchial epithelium and produced progeny. The bulk of the females attain maturity in the duodenum and jejunum but some do so in the stomach and rectal mucosa. The most unique and effective response by the host tissue is the encapsulation of the worms followed by phagocytosis. Larvae invading the muscularis mucosae form pseudotubercles. In all the local reactions eosinophiles are absent. Rarer foci occur in the gall bladder, central nervous system and kidney. R.T.L.

208—Archivio Italiano di Scienze Mediche Coloniali.

a. POGGI, I.—"Osservazioni e statistica degli esami coprologici praticati nell'Istituto dal 1 agosto 1934 al 1 agosto 1935." XVI (9), 655-657. [1935.]
b. MEDULLA, C.—"La fuadina nella cura della Bilharziosi vescicale." XVI (9), 658-663. [1935.]

209—Australian and New Zealand Journal of Surgery.

a. BARNETT, L. E.—" Gaps in our knowledge of hydatid disease. A plea for further research and a tribute to Professor Félix Dévé, of Rouen." IV (3), 211-218. [1935.]

(209a) Barnett urges that Australia and New Zealand, as the only English speaking countries in which hydatid disease is now common, should take a larger share in acquiring and distributing knowledge of this serious infection.

The Royal Australasian College of Surgeons has established a Hydatid Registry for the collective clinical investigation of cases. Barnett is not satisfied with the result of present day methods of diagnosis and indicates the directions in which further research is called for. R.T.L.

210—Bahia Medica.

a. CASTRO LIMA, O. DE—" Perturbações nasaes no curso da esquistosomose." VI, 27-30. [1935.]

211—Berliner Tierärztliche Wochenschrift.

a. WAGEMANN, H.—" Bisherige Erfahrungen mit dem abgekürzten Gefrierverfahren zur Tauglichmachung finnigen Rindfleisches." LI (29), 458-459. [1935.]

b. PALIMPSESTOW, M. A. & DJEGTERENKO, O. J.—" Dehelminthisationsmethoden bei Zestodosen der Hunde." LI (33), 517-518. [1935.]

(211a) Wagemann reports that little use has yet been made in Germany of the new rapid process for freezing meat infested with cysticerci, since there is no public demand for frozen meat. Meat is stored at − 7° to − 8°C. for 4 to 6 days so as to ensure that all parts are reduced to at most − 3°C. for at least 24 hours. This involves a loss of weight of only about 2·2%, as against about 5% in the old chilling process (21 days at 0° to +4°C.). The meat survives the process satisfactorily if it is thawed gradually at about +5°C. in an atmosphere of about 90% relative humidity. B.G.P.

(211b) Palimpsestow & Djegterenko find that arecolin hydrobromide at the rate of 2 to 3 mg. per Kg. body weight is useless against cestodes in dogs, although it has some effect on Alaria and hookworms. When the rate is increased to 4 to 15 mg. per Kg. (actually 58 mg. per dog was given), the drug is valuable against taenias, has some slight effect on ascarids, but is ineffective against Mesocestoides. B.G.P.

212—Boletín del Instituto de Clínica Quirúrgica.

a. IVANISSEVICH, O.—" A propósito de hidatidosis del bazo." XI (91/93), 115-117. [1935.]

(212a) [Hydatid of the spleen.]

213—Bollettino e Memorie della Società Piemontese di Chirurgia.

a. TARQUINI, C.—" Cisti da echinococco del polmone operata col metodo Valdoni." V, 48-60. [1935.]

214—Bulletin de l'Institut Océanographique.

a. GUIART, J.—" Le véritable *Floriceps saccatus* de Cuvier n'est pas la larve géante de Tétrarhynque vivant dans le fois du Môle (*Mola mola*)." No. 666, pp. 1-12. [1935.]

b. TIMON-DAVID, J.—" Sur les *Wedlia* parasites de l'estomac du Thon (Trématodes, Didymozoonidae)." No. 670, pp. 1-11. [1935.]

(214a) In 1931 Guiart was in favour of suppressing Cuvier's genus *Floriceps*, since Cuvier's figures of *F. saccatus* did not agree with the large tetrarhynchid larvae commonly found in the liver of *Mola mola*. Guiart now claims that the true *F. saccatus* is a rare and minute tetrarhynchid larva found under the peritoneum of the same fish. *Callotetrarhynchus* Pintner, 1931 falls into the synonymy of *Floriceps*. B.G.P.

(214b) Timon-David discusses the relationship of specimens of *Wedlia*, found in cysts in the stomach of *Thynnus thynnus* in the Mediterranean, to *W. bipartita* (Wedl 1855) and *W. orientalis* Yamaguti 1934. R.T.L.

215—Bulletins et Mémoires de la Société Nationale de Chirurgie.

a. SABADINI, L.—" 1°. Rupture spontanée d'un kyste hydatique de la rate. Accouchement intrapéritonéal d'une vésicule hydatique intacte pesant 4 kilogr. 800. 2°. Double kyste hydatique de la rate." LXI (11), 439-442. [1935.]

216—Bulletin Mensuel de l'Office International d'Hygiène Publique.

a. ARAR, A.—" Les résultats de la lutte contre l'ankylostomiase dans la province de Rizé (actuellement Tchorouk) en Turquie." XXVII (9), 1774-1778. [1935.]

217—Bulletin of the Mysore Coffee Experiment Station. Department of Agriculture, Bangalore.

a. MAYNE, W. W.—" Work on nematode worms and the establishment of supplies." No. 13, pp. 20-24. [1935.]

(217a) Mayne records the results of investigations on nematodes in soil, their effects on coffee plants and means of combatting these by manurial treatments.

Great seasonal fluctuations in the nematode content of soil were found to exist, but numerous nematodes could be extracted from the top 9 inches of soil in the dry season when the soil had been watered previous to collection. Inoculation experiments failed to produce death of the plants although root-rot occurred in some cases. Preliminary trials of manurial treatments as means of controlling nematode disease in coffee indicated that nitrogen and phosphoric acid were beneficial but that potash should be omitted.

M.J.T.

218—Bulletin de la Société Française d'Urologie.

a. HEITZ-BOYER.—" Un cas de bilharziose vésicale d'origine européenne." Année 1935, No. 1, pp. 65-67. [1935.]

(218a) A case of *Schistosoma haematobium* is reported from Santa Luzia in the south of Portugal. R.T.L.

219—Bulletins de la Société de Médecine Turque.

a. SEREFEDDIN ÇELIK, O.—[Finding of two living ascarids in peritoneum of typhoid patient with perforative peritonitis.] I, 82-83. [1935.]

220—Bulletin de la Société Médico-Chirurgicale de l'Indochine.

a. MICKANIEWSKI & NGUYÊN-VAN-CHUC.—" Le parasitisme à Sadec. Fonctionnement du laboratoire." XIII (4), 382-386. [1935.]
b. MAY, J. M.—" Réflexions à propos de deux cas d'ascaridiose." XIII (7), 951-962. [1935.]

221—Bulletin de la Société de Pathologie Exotique.

a. TISSEUIL, J.—" Essai, chez la sarigue Philander, de transplantation de filaire dans la cavité péritonéale de sarigue non parasitée." XXVIII (7), 566-568. [1935.]

(221a) After introducing artificially an adult male and female filaria into the peritoneal cavity of an opossum, Tisseuil found microfilariae in the peripheral blood between the 9th and 17th days after the operation. A post mortem examination on the 18th day showed traces of a degenerating filarial adult in a cyst in the omentum. B.G.P.

222—Clinical Journal.

a. BENNETT, R. A.—" Case of Paragonimus haemoptysis." LXIV (2), 76-78. [1935.]

223—Clujul Medical.

a. DANIEL.—[Case of ankylostomiasis diagnosed by duodenal tube.] XVI, 134-136. [1935.]

224—Comptes Rendus des Séances de la Société de Biologie.

a. CARRÈRE, P.—" Rapport entre le développement des Batraciens anoures et la destinée de leurs métacercaires." CXX (29), 155-157. [1935.]
b. JOYEUX, C. & BAER, G. J.—" Un Ténia hyperapolytique chez un mammifère." CXX (31), 334-336. [1935.]

(224a) Carrère has studied the metacercariae of *Euryhelmis squamula*, a parasite of *Rana esculenta*. They encyst mainly on the tail, migrating along as it is absorbed during metamorphosis. Only those which finally settle on the stump are capable of completing their metamorphosis. The metacercariae of *Opisthioglyphe ranae* also encyst subcutaneously and migrate along to the buccal cavity and later to the submucosa of the oesophagus. The mucosa suffers desquamation, liberating the larvae into the lumen. They finish their development as they pass down the intestine and settle in the rectum. P.A.C.

(224b) Joyeux & Baer describe *Pseudhymenolepis redonica* n. sp. from *Crocidura russula*. The rostellum carries a single crown of 14 hooks. The segments become detached from the scolex before the appearance of the genitalia and complete their development outside the body. There are 3 testes as in *Hymenolepis* but the uterus breaks up into capsules each containing a single egg. On this point the new genus and new subfamily Pseudhymenolepidinae are created. P.A.C.

225—Crónica Médico-Quirúrgica de la Habana.

a. FAZ TABÍO, H.—" A propósito de un caso de ascaridiosis aberrante." LXI (2), 57-60. [1935.]

226—Deutsche Landwirtschaftliche Geflügelzeitung.

a. WEGNER, J.—" Zuverlässige Wurmmittel aus dem Pflanzenreich." XXXVIII (32), 515-516. [1935.]

227—Deutsche Pelztierzüchter.

a. ALLEN, J. A.—" Pelztier-Parasiten." X (16), 306-311. [1935.]

(227a) A translation into German of the paper read by Allen to the 5th Pacific Science Congress 1933. Allen briefly describes the control of the ascarids, hookworms, lungworms, flukes and some non-helminthic parasites found in fur-bearing animals. The paper concludes with a useful list giving parasites with their location, arranged under hosts. B.G.P.

228—Deutsche Tierärztliche Wochenschrift.

a. WAGNER, H.—" Ein Beitrag zum Sklerostomenbefall der Pferde, unter besonderer Berücksichtigung der Verhältnisse bei den Fohlen." XLIII (26), 401-406. [1935.]

b. SCHOOP, G.—" Die Spulwurmkrankheit der Füchse." XLIII (28), 433-435. [1935.]

(228a) Wagner describes results of an investigation into the incidence of sclerostomes in foals and young horses. He has not found eggs in foals under 24 hours old and only in small numbers up to 3 weeks of age, after which a jump in numbers occurs which he considers due primarily to weaning. In horses one, two and three years old egg counts show a gradual decrease with age. The incidence of sclerostomiasis and the egg count, he points out, have a corresponding seasonal variation, being highest in March and November and lowest in June, July and December. The difficulties of control are discussed and he suggests that the only practical procedures are therapeutic measures such as giving liquid arsenic preparations in small doses daily for a week in the food in the autumn and spring.

J.W.G.L.

(228b) Schoop states that 1935 has been a bad year for ascariasis in foxes. He describes the life-history of the parasite and recommends measures for its control. These include treatment with carbon tetrachloride in doses of 0·3 gm. per Kg. body weight. The infection is heaviest and most pathogenic in whelps, the vixen acting as a healthy carrier. Control measures therefore entail anthelmintic treatment of the whelps, while at the same time the foxes are moved on to clean runs and all sleeping or breeding boxes are carefully scalded with boiling water. It is essential to examine the faeces of foxes microscopically once a year. B.G.P.

229—Duodecim, Lääketieteellinen Aikakauskirja.

a. MIKKONEN, H.—[Case of pulmonary echinococcosis treated surgically.] LI, 139-146. [1935.]

230—East African Medical Journal.

a. PLUM, D.—" Observations on ankylostomiasis and anaemia in Kenya, with special reference to the Digo and Embu districts." XII (6), 162-185. [1935.]

231—Echo Médical du Nord.

a. COUTELEN, F.—" Sur les dangers immédiats et éloignés de la ponction des kystes hydatiques." III (1), 11-13. [1935.]
b. COUTELEN, F.—" Echinococcose du foie et médecine légale ; à propos d'un cas de mort subite." III (14), 539-543. [1935.]

232—Farming in South Africa.

a. ORTLEPP, R. J.—" The sheep hookworm. Its appearance, life-cycle, control and remedial measures." X (106), 10-11. [1935.]
b. ANON.—" Wireworm remedy. Instructions for use." X (109), 167-168. [1935.]
c. MÖNNIG, H. O.—" Nodular worm remedy." X (112), 305 & 308. [1935.]

(232a) Ortlepp deals with the life-cycles, symptoms and control of *Bunostomum trigonocephalum* and *Gaigeria pachyscelis*, the former prevalent in the more humid parts of South Africa such as Natal and the coastal areas, the latter in the more arid areas such as the districts of Vryburg and Prieska, Bechuanaland and South-west Africa. Chemically pure tetrachlorethylene mixed with one or two parts of liquid paraffin kills these worms if 10 cc. of a 2% solution of copper sulphate is given immediately before dosing. Transitory alarming symptoms disappear within 24 hours and it is advisable first to subject only a few sheep out of the flock to acquire familiarity with these after effects. R.T.L.

233—Gazette Hebdomadaire des Sciences Médicales de Bordeaux.

a. DARGET, R. & LANGE.—" Coexistence d'un calcul du bassinet et d'un kyste hydatique de face postérieure du foie, opérés par la même voie lombaire." LVI (38), p. 609. [1935.]

234—Gazzetta Internazionale di Medicina e Chirurgia.

a. PORCELLI, A.—Considerazioni diagnostiche su di alcuni casi di cisti da echinococco del fegato." XLV, 83-94. [1935.]

(234a) [Diagnostic aspects of some cases of liver hydatid.]

235—Geneeskundig Tijdschrift voor Nederlandsch-Indië.

a. SCHEEPE, F. L.—" De verspreiding der Filariasis in Indragiri (Residentie Riouw en Onderhoorigheden)." LXXV (15), 1197-1201. [1935.]
b. VOS, J. J. T.—" Cysticercus-leversarcoom bij ratten." LXXV (16), 1271-1286. [1935.]
c. BURGGRAAF, H.—" Een geval van tumorvorming bij pancreas-distomatose van het rund." LXXV (16), 1399-1406. [1935.]

(235a) Scheepe has found *Microfilaria malayi* in man in a large territory on the upper reaches of the Indragiri [Sumatra]. As a result of examining over 5,000 persons, 10% of the population, he found 18% of them infected. The various clinical manifestations are noted. B.G.P.

(235b) [Cysticercus liver sarcoma in rats.]

(235c) Burggraaf describes the pathological lesions of the pancreas found by him in 110 cattle, infected with *Eurytrema pancreaticum*, from the east coast of Sumatra. In one case 1,250 flukes were found. Macroscopically the organ is not greatly changed, apart from loss of colour and hard consistency, but microscopically the ducts show considerable inflammatory and fibrotic lesions, and there is proliferation of the glandular elements. The author describes one case of adeno-carcinoma probably initiated by the parasitic lesions. B.G.P.

236—Hong Kong Naturalist.

a. CHEN, H. T.—"Animal parasites of hogs, goats and buffaloes from Hong Kong." VI (2), 102-104. [1935.]

(236a) Chen records the percentage incidence of helminth infection of approximately 300 carcases of domesticated food animals slaughtered in Hong Kong. R.T.L.

237—Hospital.

a. LENT, H. & FREITAS, J. F. TEIXEIRA DE.—"Noções de Technica Helminthologica." Anno VII, II (7), [Reprint 24 pp.]

238—Hygeia.

a. LILLINGSTON, C.—"Our parasites. Two common intestinal worms." XIII (1), 60-63. [1935.]

239—Imperial Bureau of Agricultural Parasitology. Publications.

a. GOODEY, T.—"The pathology and aetiology of plant lesions caused by parasitic nematodes." 34 pp. [1935.]
b. LAPAGE, G.—"The bearing of the physiology of parasitic nematodes on their treatment and control." 21 pp. [1935.]

(239a) Goodey describes the diverse variety of lesions caused by plant-parasitic nematodes and discusses their aetiology.

Descriptive pathology of lesions caused by the genera *Anguillulina*, *Tylenchulus*, *Heterodera* and *Aphelenchoides* is given under the following group headings: flower galls, leaf galls, general stem lesions, root galls, and other root lesions. Both early and recent views on the aetiology of these lesions are summarized and it is shown that modern investigations indicate the cause of the lesions to be chemical rather than mechanical, thus falling in line with recent views on the aetiology of plant galls resulting from attacks of Eriophyid mites and Cynipid insects. M.J.T.

(239b) Lapage claims that the failure to control helminthic infections and the ineffectiveness of the majority of anthelmintics are largely due to the lack of sound information on the physiological relationship between the host and its parasites.

The present knowledge on the physiology of nematodes is reviewed and numerous lines requiring investigation are fully discussed. Among these

are mentioned such problems as respiration and excretion in this group of worms, their feeding habits in the host, the composition and permeability of the cuticle and the wider problems of host reactions and pathogenicity. The author concludes with the plea that, for such physiological studies, more efficient methods for diagnosing specific nematode infections are necessary and also points out that the study of control measures would be greatly facilitated if both larval and adult nematodes could be cultivated *in vitro*. D.O.M.

240—Indian Journal of Veterinary Science and Animal Husbandry.

a. RAO, M. A. N.—" Further observations on bovine nasal schistosomiasis." V (3), 266-273. [1935.]

(240a) That *Schistosoma nasalis* in cattle and *S. spindalis* in sheep, in India, are specifically distinct is further demonstrated by a comparison of the length frequency curves of the ova. Infections with *S. spindalis* produce a partial immunity against *S. nasalis* in buffaloes and some bovines. Cercariae Indicae XXX Sewell 1922 is the larval form of *S. nasalis*. *S. spindalis* does not produce nasal schistosomiasis. R.T.L.

241—Indian Medical Gazette.

a. DOGRA, J. R. & AHERN, D. M.—" A case of cysticercosis." LXX (9), p. 510. [1935.]

242—International Veterinary Congress (12th), New York.

a. HALL, M. C.—" Therapeutics of worm diseases." Vol. III, pp. 1-19. [In English : French, German & Spanish summaries.] [1935.]
b. SKRIABINE, K. J.—" Le problème de la déshelminthisation des animaux à l'U.R.S.S." Vol. III, pp. 20-43. [In French : English, German & Spanish summaries.] [1935.]
c. CAMERON, T. W. M.—" Immunity against animal parasites." Vol. III, pp. 44-65. [In English : French, German & Spanish summaries.] [1935.]
d. KOTLÁN, A.—" Immunological phenomena in the field of parasitology." Vol. III, pp. 65-75. [In English : French, German & Spanish summaries.] [1935.]

(242a) [See Helm. Abs. Vol. III., No. 269c.]

(242b) Skriabine considers the position of anthelmintics in veterinary practice. All the helminths of domesticated animals are considered in turn and the different treatments that may be given are compared. He recommends that " dishelminthization " be considered as an action of a prophylactic character and that helminthic training should be considerably increased. He suggests the formation of an international committee on the control of parasitic diseases. P.A.C.

(242c) Cameron considers the whole question of immunity to parasitic infestation. A few helminths appear to have very wide physiological requirements but as a rule animals are intolerant of parasites of physiologically unrelated animals. The evidence for premunition, for breed immunity to metazoa is scanty. Hypersensitivity seems to be a normal defence mechanism and the phenomenon is made use of in diagnosis. P.A.C.

(242d) Kotlán defines and summarizes the three phenomena of parasitic immunity, i.e., natural, age, and acquired resistances. Natural resistance is a constitutional peculiarity of a host while age resistance is apparently based on a non-specific defence mechanism. He takes the view that acquired immunity to metazoan parasites has been demonstrated and is probably local in most cases. It is based on a specific activity of the general defence mechanism of the host. P.A.C.

243—Japanese Journal of Experimental Medicine.

a. YAMASAKI, M.—" Clinical and experimental studies on hookworm infection." XIII (4), 457-470. [1935.]

(243a) The high incidence and wide distribution of hookworm and ascaris infections in the Kyuhin district of Japan is due to the sandy soil combined with the sustained rainfall and the use of human excrement as fertilizer. The larvae of human and canine species of hookworm can withstand immersion in a 10% salt solution for 24 hours, 5% solution for 5 to 16 days and 1% for 100 days. The larvae can be found in the oral mucosa and upper respiratory tract from 10 minutes to 24 hours after oral administration. The differences of location and extent of larval invasion between normal and abnormal hosts are noted. R.T.L.

244—Journal of Agricultural Research.

a. THORNE, G.—" The sugar beet nematode and other indigenous nemic parasites of shadscale." LI (6), 509-514. [1935.]

(244a) Thorne describes the distribution, morphology and effect on the host of indigenous nematodes attacking shadscale (*Atriplex confertifolia*) in Utah.

H. schachtii has been found to form a natural infection on this host in widely scattered, isolated foci. No symptoms of disease are shown by the host. The nematode resembles the strain common on beet except in that the male tail is longer than normally occurs in the beet strain. *Anguillulina aberrans* n. sp. shows characters which indicate a relationship to both *Heterodera* and *Tylenchus*, and is described in detail. *Neotylenchus latus* n. sp. was found to be of too rare occurrence to be of significance as a parasite. M.J.T.

245—Journal of the American Veterinary Medical Association.

a. ANON.—" Report of committee on parasitic diseases." [Paper read at the 38th Annual Meeting of the United States Live Stock Sanitary Association.] LXXXVI (3), 435-442. [1935.]

246—Journal of the Chosen Medical Association.

a. NAGAHANA, M.—" *Paragonimus westermanii* in a lion." XXV (7), [In Japanese : English summary p. 53.] [1935.]

247—Journal of Comparative Pathology and Therapeutics.

a. McEWEN, A. D.—" The control of parasitic gastritis and enteritis in sheep by treatment with copper sulphate and nicotine sulphate." XLVIII (3), 218-235. [1935.]

(247a) McEwen treated one-half of a Romney marsh flock throughout the winter, the other half being left untreated as controls, of which some were later treated with copper sulphate or nicotine sulphate alone. Sheep are not usually kept on the marsh in winter, due to the ravages of the smaller species of stomach and intestinal nematodes. Of the lambs treated with the mixture only 8·3% died, while of the entire control group 47% died, mostly among those left untreated. Nicotine sulphate appears to be superior to copper sulphate when used alone, and it is suggested the mixture may owe its efficacy to the action of the copper sulphate in carrying the dose direct to the abomasum. At the conclusion of the experiments the treated animals fetched more than double the price of the entire control group. E.M.S.

248—Journal-Lancet.

a. BUSHNELL, W. F.—"Trichinosis as public health problem." LV, 42-46. [1935.]

249—Journal de Médecine de Lyon.

a. FETHI.—"A propos d'un cas de distomatose-fasciola hepatica observé à Istanbul." XVI (362), 87-88. [1935.]

250—Journal of the Mount Sinai Hospital.

a. ORTIZ, P. N.—"Hepatic distomiasis produced by *Fasciola hepatica*." I, 246-250. [1935.]

251—Journal of the New York Entomological Society.

a. GLASER, R. W. & FARRELL, C. C.—"Field experiments with the Japanese beetle and its nematode parasite." XLIII, 345-371. [1935.]

(251a) From 1931 to 1934 Glaser & Farrell carried out field experiments with the Oxyurid, *Neoaplectana glaseri*, a parasite of the Japanese Beetle, *Popillia japonica* [see Helm. Abs., Vol. I, No. 49a].

They examined small field plots, periodically infected with grubs, and, from yearly records which were kept of the emergence of adults, obtained evidence of the permanent establishment of the nematode which was producing a high mortality amongst the beetles. Large field experiments were also made, surface introduction by spraying and sub-surface introduction by burying being the two methods used to inoculate the soil. The latter method gave significant results and the nematodes became established, produced a high mortality and spread over the entire experimental area and later into the surrounding area. Little difference in result was noted between heavily and lightly inoculated plots. A statistical analysis of the experimental data is given. Birds, moles, climate and other factors appear to render it impossible to maintain a constant, heavy population over a period of years within a given territory. J.N.O.

252—Journal of Obstetrics and Gynaecology of the British Empire.

a. WICKRAMASURIYA, G. A. W.—"The grave risks of hookworm disease as a complication of pregnancy." XLII (2), 217-267. [1935.]

253—Journal of Oriental Medicine.

a. MATSUURA, T.—"Ein Fall von Cysticercus cellulose hominis." XXIII (3), [German summary p. 36.] [1935.]

254—Journal of Pediatrics.

a. GORDON, M. B., CARES, R. & KAUFMAN, B.—"Encephalitis and myocarditis in fatal case of trichinosis; report of case in 14-year-old girl." VI (5), 667-675. [1935.]

255—Journal of Pharmacology and Experimental Therapeutics.

a. LAMSON, P. D., BROWN, H. W. & WARD, C. B.—"Anthelmintic studies on alkylhydroxybenzenes. I. Alkylpolyhydroxybenzenes." LIII (2), 198-217. [1935.]
b. LAMSON, P. D., BROWN, H. W., STOUGHTON, R. W., HARWOOD, P. D., BALTZLY, R. & BASS, A.—"Anthelmintic studies on alkylhydrobenzenes. II. Ortho- and para-n-alkylphenols." LIII (2), 218-226. [1935.]
c. LAMSON, P. D. & BROWN, H. W.—"Anthelmintic studies on alkylhydrobenzenes. III. 6-n-alkyl-meta-cresols." LIII (2), 227-233. [1935.]
d. LAMSON, P. D., BROWN, H. W., STOUGHTON, R. W., HARWOOD, P. D., BALTZLY, R. & BASS, A.—"Anthelmintic studies on alkylhydroxybenzenes. IV. Isomerism in polyalkylphenols." LIII (2), 234-238. [1935.]
e. LAMSON, P. D., BROWN, H. W., STOUGHTON, R. W., HARWOOD P. D., BALTZLY, R. & BASS, A.—"Anthelmintic studies on alkylhydroxybenzenes. V. Phenols with other than normal alkyl side chains." LIII (2), 239-249. [1935.]

(255a) Lamson, Brown & Ward have examined the anthelmintic properties of a series of alkyl polyhydroxybenzenes and found that none was so effective as hexylresorcinol. This substance was investigated in detail and various methods for its administration to man were tried, the most successful being in the form of sugar-coated pills. If, however, these pills are chewed by the patient, an irritant effect is produced in the mouth. R.H.H.

(255b) Lamson & co-workers have investigated the anthelmintic properties of series of ortho- and para-alkyl phenols. Ortho-heptyl phenol was the lowest member of the series to produce no whitening of the mucous membrane of the mouth. In doses four times as great as hexylresorcinol, this substance removed 38% *Ascaris lumbricoides*, 58% *Necator americanus*, and 32% *Trichuris trichiura*, compared with 90 to 100%, 70 to 80% and 30 to 50% removed by hexylresorcinol. R.H.H.

(255c) Lamson & Brown found that in the series of 6-alkyl-m-cresols, the lowest member which did not cause whitening of the mucous membrane of the mouth was 6-hexyl-m-cresol. This substance was, however, a less effective ascaricide in man than hexylresorcinol. R.H.H.

(255d) Lamson & co-workers have investigated the anthelmintic effect of a series of polyalkyl phenols and found that melting point and solubility of the compounds were related to their ascaricidal properties. None of the substances gave indications that it would be a more practical human ascaricide than hexylresorcinol. R.H.H.

(255e) Lamson & co-workers found that alkylphenols with other than normal side chains were not so active in ascaricidal properties as hexylresorcinol. Summarizing the results of the series of five papers, the authors

conclude that the phenols which proved to be good ascaricides either were liquids or had melting points not over 75°C., and had a solubility range of 1 : 1,000 to 1 : 35,000. The ascaricidal properties of phenols and resorcinols were increased by the introduction of alkyl radicals. No substance was found which showed as great ascaricidal properties as hexyl resorcinol whilst at the same time possessing less local irritant action. R.H.H.

256—Journal of the Philippine Islands Medical Association.

a. AFRICA, C. N., GARCIA, E. Y. & LAYCO, J.—"Periodic human microfilaria in the Philippines." xv (8), 407-412. [1935.]

b. PAYAD, E.—"Informe de algunas manifestaciones clinicas de Ankylostomiasis medianamente infectadas." xv (8), 435-437. [1935.]

(256a) Observers subsequent to Craig & Ashburn have all reported the presence of microfilariae with nocturnal periodicity in human cases in the Philippines and these observations have been confirmed. Craig & Ashburn's report of non-periodic microfilariae may be explained by the ethnic origin of the Filipino race. R.T.L.

257—Journal of the Public Health Association of Japan.

a. SAITO, M.—"Wild rats in reference to the prevention of schistosomiasis." xi (3), 1-5. [1935.]

(257a) An examination of wild rats in the Kofu valley of the Yamanashi Prefecture showed a high degree of natural infections with *Schistosoma japonicum*.

The rate in the summer months of July and August attained 76·89% whereas in the winter from November to March the rate fell to 19·17%. In districts in which preventive measures directed against the intermediate host had been enforced the rate fell to 2·19% indicating the effectiveness of liming, boiling water and the acetylene flame methods adopted. The various species of rats showed different degrees of infestation. In the cold season it was 17·94% for *Microtus montebelli*, 16·77% for *Apodemus speciosus*, 4·44% for *Rattus norvegicus* and 1·54% for *Mus molossinus*. In the summer months the rates were 64·78% for *Microtus montebelli*, 58·06% for *Apodemus speciosus*, while none of the few *Rattus norvegicus* caught were infected. The number of parasites in each rat ranged from 1 to 285. The average length of the male worms was 1·48 cm. and of the female worms 1·79 cm. There was evidence of spontaneous recovery in some cases. R.T.L.

258—Journal of the South African Veterinary Medical Association.

a. VILJOEN, N. F.—"Notes on two cases of cysticercis [cysticercosis]." vi (3), p. 191. [1935.]

259—Journal of the Washington Academy of Sciences.

a. WEHR, E. E.—"A restudy of *Filariopsis arator* Chandler, 1931, with a discussion of the systematic position of the genus *Filariopsis* van Thiel, 1926." xxv (9), 415-418. [1935.]

(259a) Wehr is of opinion that the genus *Filariopsis* belongs to the Filaroidinae in the family Pseudaliidae rather than to the Filarioidea.

R.T.L.

260—Kinderärztliche Praxis.

a. BISCHOFF, H.—Über die häufigsten Eingeweidewürmer der Kinder und ihre Behandlung." VI (1), 28-39. [1935.]

261—Lancet.

a. LANE, C.—" The appraisement of hookworm-killing drugs." CCXXVIII (5834), 1459-1464. [1935.]

(261a) Clayton Lane reviews different techniques that have been used for estimating the efficiency of drugs used against hookworms in man, and points out the greater reliability of the Direct Centrifugal Flotation method for calculating the number of eggs in a sample of faeces. He has summarized the results of the anthelmintics that have been used, and finds that of these Thymol has the greatest efficiency together with the greatest safety. He believes that all anthelmintic treatment should aim at complete deworming.

K.S.

262—Lingnan Science Journal.

a. YEN, C. H. & CHANG, T. L.—" The periodicity of *Microfilaria malayi* Brug as observed from a case in the Lester Chinese Hospital, Shanghai." XIV (3), 399-402. [1935.]

263—Medical Journal of Australia.

a. JEREMY, R. & JONES, E. B.—" Report of a patient with hepatic distomiasis." 22nd year, II (11), 351-352. [1935.]

264—Medical Officer.

a. M'GONIGLE, G. C. M.—" Experimental use of wheat germ extract." LIII, p. 17. [1935.]

(264a) M'Gonigle reports the use of wheat germ extract, supposed to be a concentrate of vitamin E, in the elimination of thread worms in children. In 108 cases which were followed, a 68·5% efficiency is recorded.

P.A.C.

265—Medizinische Klinik.

a. ZIEMANN, H.—" Neueres aus dem Gebiete der Infektionskrankheiten, der exotischen Pathologie, Parasitologie und Hygiene." XXXI (6), 186-188. [1935.]

(265a) In the course of his review of recent developments, Ziemann briefly touches upon the use of antimony in schistosomiasis. B.G.P.

266—Medizinische Welt.

a. AUGSBERGER, G.—" Ein Fall von Echinococcus beim Menschen." IX (5), p. 163. [1935.]

267—Mémoires du Musée Royal d'Histoire Naturelle de Belgique.

a. SCHUURMANS STEKHOVEN, JR., J. H.—" Additional notes to my monographs on the free-living marine nemas of the Belgian coast. I and II. Written in collaboration with W. Adam and L. A. de Coninck, with some remarks on the ecology of Belgian nemas." No. 72, 36 pp. [1935.]

(267a) Schuurmans Stekhoven sets out in tabular form the results of an examination of 23 samples of mud and sand from the Belgian coast. The tables give the various species found with the numbers of adults of each sex and the number of immature forms. For each sample a Nemic Index is given, i.e., the number of nematodes per cc. of the sample. In discussing the oecological aspects of the survey, the author concludes that the quantitative richness of the nematode population depends on the amount of mud and detritus present in a given habitat. In the systematic part of the paper, the following are described as new species: *Longicyatholaimus clavicaudatus*, *Neochromadora longisetosa*, *Neochromadora quinquepapillata*, *Microlaimus ostracion*, *Monhystera elegantula*, *Metadesmolaimus labiosetosus*, *Eleutherolaimus iniquisetosus* and *Sphaerocephalum longicaudatum*. T.G.

268—Memorias do Instituto Oswaldo Cruz.

a. FREITAS, J. F. TEIXEIRA DE & ALMEIDA, J. LINS DE—" Sobre os Nematoda Capillariinae parasitas de esophago e papo de aves." xxx (2), 123-156. [1935.]
b. LUTZ, A.—" Observações e considerações sobre Cyathocotylineas e Prohemistomineas." xxx (2), 157-168. [In German pp. 169-182.] [1935.]
c. FREITAS, F. J. TEIXEIRA DE & LENT, H.—" Capillariinae de animaes de sangue frio. (Nematoda: Trichuroidea)." xxx (2), 241-284. [1935.]

(268a) Descriptions of 15 species of the genus *Capillaria* from the oesophagus and crop of birds are given by Freitas & Almeida and of these, 5 species are new to science. The new species are: *C. penidoi* from *Nothura maculosa*, *C. confusa* from *Aramides cayanea*, *C. venteli* from *Cancroma cochlearia* and *Ajaja ajaja*, *C. uropapillata* from *Phasianus colchicus*, and *C. avellari* from *Mycteria mycteria*. D.O.M.

(268b) The fundamental fact about the Strigeidae, says Lutz, is the presence of a third sucker. This is elaborated almost beyond recognition in the adult Strigeinae and Alariinae, but it is obvious in those larval forms described as *Tylodelphis* and *Diplostomum* (" *Triplostomum* " would be more appropriate), and in such genera as *Cyathocotyle* and *Prohemistomum*. Lutz discusses the systematics of the Cyathocotylidae, dividing the family into Cyathocotylinae (*Cyathocotyle*) and Prohemistominae (*Prohemistomum*, *Mesostephanus*, *Prosostephanus* and *Gogatea*). The following characteristics are probably true of the whole family: adults, in piscivorous animals, with a well-developed cirrus and sac opening posteriorly; eggs large and closely similar to those of *Fasciola hepatica*; motile, annulated sporocysts (no rediae) in non-pulmonate molluscs; cercariae of the *C. vivax* type with forked tails, well-developed caeca and a pharynx, encysting in fish, where the third sucker develops. Lutz reproduces all the figures accessible to him of Cyathocotylidae. B.G.P.

(268c) Freitas & Lent give descriptions of Capillarid species recorded from reptiles, batrachians and fishes. *Capillaria carioca* n. sp. is described from *Sphaeroides testudineus* and a new genus *Capillostrongyloides* is erected

with *C. zederi* n. sp. from *Hoplias malabaricus* as type. The new genus also includes *C. minimum* (Travassos, Artigas & Pereira, 1928). The paper is well illustrated and contains useful keys to species and host lists. D.O.M.

269—Monatsschrift für Psychiatrie und Neurologie.

a. HOFMANN, E.—"Askaris-Infektion und der epileptische Symptomenkomplex." XC, 253-264. [1935.]

(269a) On the basis of 600 persons examined, Hofmann finds an association between the incidence of ascaris infection and that of epileptiform symptoms. More than a third of epileptics were positive for ascaris in a stool-examination, and when diagnosis of ascaris was instead based on the cutaneous reaction the proportion was 83%. The author concludes that true epilepsy is less common than has been supposed. B.G.P.

270—Nature.

a. TETLEY, J. H.—"Distribution of nematodes in the small intestine of the sheep." CXXXVI (3438), 477-478. [1935.]

(270a) Tetley notes a constancy in the site distribution of the different species of nematodes in the small intestine of sheep. This does not vary either with age of the host or differences of season. From this he infers that neither an active or passive migration of the adult worms takes place in the host, that the site of infection is determined during the larval stage and that the stimuli which cause the larvae to take up their predestined sites are present in the contents of the small intestine. Specific differences in distribution are due to inherent dissimilarities in rates of reaction to these stimuli. R.T.L.

271—Nebraska State Medical Journal.

a. BUIS, J.—"Two cases of trichinosis." XX (5), 179-180. [1935.]

272—Nederlandsch-Indische Bladen voor Diergeneeskunde en Dierenteelt.

a. BONGA, B.—"Extracten uit de maand- en jaarverslagen der Gouvernements en Provinciale Veeartsen. No. 74. Een eigenaardige vorm van dermatitis verminosa bij buffels (stephanofilariosis ?)." XLVII (2), 107-108. [1935.]
b. TIGELAAR, A. H.—"Extracten uit de maand- en jaarverslagen der Gouvernements en Provinciale Veeartsen. No. 76. Onderzoek van wormziekte bij veulens ('oedeemziekte')." XLVII (2), 109-110. [1935.]
c. KRANEVELD, F. C.—"Stephanofilariosis. VI. Enkele bijzonderheden betreffende het lijden." XLVII (3/4), 183-186. [In Dutch: English & German summaries.] [1935.]

(272a) Bonga reports a peculiar form of verminous dermatitis in buffalo, somewhat similar to stephanofilariasis but with the lesions confined to the ears. Microfilariae were found in sections of infected ears, but fragments of adult worms teased out from scabs were insufficient for specific diagnosis. B.G.P.

(272b) An oedematous condition of the lips, head and belly of young horses is tentatively ascribed by Tigelaar to infestation with gastro-intestinal helminths, of which he has found the following: *Habronema megastoma*, *Ascaris equorum*, *Trichonema* sp., *Strongylus* spp., and *Anoplocephala magna*. The oedema may be due to a secondary anaemia. B.G.P.

(272c) Details are given with regard to breeds of cattle, localities, and parts of the body affected. The condition has also been diagnosed in goats in which it has a greater tendency to spread over the body than in cattle. H.M.

273—Nederlandsch Tijdschrift voor Geneeskunde.

a. SNIJDERS, E. P.—" Over een geval van filariasis." 79th year, II (25), 3024-3030. [1935.]
b. MICHAËL, P. R.—" Echinococcosis." 79th year, III (29), 3514-3519. [1935.]

(273b) Michaël gives a clinical discussion of hydatid disease in various organs in man. B.G.P.

274—New England Journal of Medicine.

a. SPINK, W. W. & AUGUSTINE, D. L.—" Trichinosis in Boston." CCXIII (11), 527-531. [1935.]
b. MORRISON, H.—" Trichiniasis among Jews." CCXIII (11), 531-532. [1935.]

275—New Zealand Medical Journal.

a. BARNETT, L. E.—" Formalin in hydatid cyst operations." XXXIV (179), 1-6. [1935.]

276—North American Veterinarian.

a. MORRIS, M. L., DINKEL, J. H. & GREEN, D. F.—" Laboratory diagnosis of dog heart worm." XVI (9), p. 34. [1935.]
b. STADER, O.—" Trichuriasis in a dog." XVI (9), 45-46. [1935.]

(276a) For the diagnosis of early cases of *Dirofilaria immitis* in the dog 1 cc. of blood from a vein is mixed thoroughly with 5 cc. of a 2% solution of acetic acid and centrifuged. After decanting the sediment is examined microscopically. R.T.L.

277—Northwest Medicine.

a. PEACOCK, A. H. & VOEGTLIN, W. L.—" Sporadic occurrence of bilharziasis in Washington." XXXIV (5), 174-176. [1935.]

278—Nuova Veterinaria.

a. SPENA, A.—" Sopra un cestode parassita della gazzella." XIII (9), 21-24. [1935.]

(278a) Spena records *Moniezia expansa* from a gazelle in the Rome Zoo, a new host for this species. The cestode, which is described and figured, differs slightly from the typical *M. expansa* and from its varieties *trigonophora*, *nullicollis*, *oblongiceps* and *minima*, but not sufficiently to warrant the creation of a new varietal name. B.G.P.

279—Ohio State Medical Journal.

a. DORAN, F. J.—" Trichinosis." XXXI, 267-268. [1935.]

280—Onderstepoort Journal of Veterinary Science and Animal Industry.

a. ORTLEPP, R. J.—" On some helminths from the " Nylghiae "—*Boselaphus tragocamelus* (Pall.) with observations on the parasitic larval stages of the stomach worm *Ashworthius martinagliai* sp. n." V (1), 43-50. [1935.]

b. ORTLEPP, R. J.—" On the metacercaria and adult of *Clinostomum van der horsti* sp. n., a trematode parasite of fishes and herons." V (1), 51-58. [1935.]

(280a) From the Indian " Nylghiae " *Boselaphus tragocamelus* Ortlepp has obtained *Trichuris globulosus*, *Cotylophoron cotylophoron*, *Gastrothylax crumenifer* and a new trichostrongylid stomach worm named *Ashworthius martinagliai* which has the " Barber-pole " markings of *Haemonchus contortus*. R.T.L.

(280b) A new species of *Clinostomum* is described near to *C. lophophallum* Baer 1933 but without a pharynx. The intestinal caeca open into the excretory canal. Heavy larval infestations occurred in the fish *Gnathonemus macrolepidotus* and adults were obtained by feeding these to *Ardea melanocephala*. R.T.L.

281—Pacific Science Congress (5th). Dominion Laboratory of Plant Pathology, Canada.

a. NEWTON, W., HASTINGS, R. J. & BOSHER, J. E.—" The control of plant diseases caused by nematodes." 6 pp. [1935.]

(281a) Newton, Hastings & Bosher discuss the use of certain fumigants as means of controlling plant-parasitic nematodes.

Ethylene dichloride was found to be more effective in destroying *Tylenchus dipsaci* than carbon tetrachloride but the use of a mixture of these two substances reduced fire hazard. At least 2-hour exposure to this mixture was necessary to cause death, shorter exposures produced anesthesia only. In a 24-hour fumigation period the lowest lethal concentrations were 15·7 lb. ethylene dichloride per 1,000 cubic feet, or 21·9 lb. per 1,000 cubic feet of a three to one mixture of ethylene dichloride and carbon tetrachloride. The need for some method of controlling the root-knot nematode by means of fumigation is emphasized. M.J.T.

282—Pediatria.

a. VIGLIETTA, C.—" Osservazioni e ricerche sulla schistosomiasi vescicale dei bambini." XLIII (1), 54-66. [1935.]

b. MARTILLOTTI, F.—" L'ascaridiosi nell'infanzia." XLIII (3), 321-331. [1935.]

283—Peking Natural History Bulletin.

a. TSENG, SHEN.—" Anatomy of a new appendiculate trematode from the sea eel." IX (3), 171-180. [1935.]

b. HU, S. M. K.—" Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Wuchereria bancrofti* Cobbold. I. *Aedes albopictus* Skuse." IX (4), 249-254. [1935.]
c. HU, S. M. K.—" Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Wuchereria bancrofti* Cobbold. II. *Armigeres obturbans* Walker." IX (4), 255-260. [1935.]

(283a) *Lecithocladium longicaudum* n. sp. frequently infests the stomach, intestine, oesophagus and body-cavity of the sea-eel *Muraenesox cinereus* sold in the Tsingtao market. A table is given differentiating the species which now number six. R.T.L.

(283b) *Aedes albopictus* is not an efficient intermediary for *Wuchereria bancrofti*. Of 62 fed experimentally on a heavily infected case in Shanghai 48 harboured dead immature Filaria larvae. In 4 chitinous encapsulation occurred. R.T.L.

(283c) *Wuchereria bancrofti* undergoes only partial development in *Armigeres obturbans*, a common Shanghai mosquito. R.T.L.

284—Philippine Journal of Science.

a. AFRICA, C. M. & GARCIA, E. Y.—" Heterophyid trematodes of man and dog in the Philippines with descriptions of three new species." LVII (2), 253-265. [1935.]
b. AFRICA, C. M. & GARCIA, E. Y.—" Two more new heterophyid trematodes from the Philippines." LVII (4), 443-448. [1935.]
c. GARCIA, E. Y. & AFRICA, C. M.—" *Diphyllobothrium latum* (Linnaeus, 1758) Lühe, 1910, in a native Filipino." LVII (4), 451-456. [1935.]

(284a) At autopsies of 66 Philippine dogs 4 were found to be infected with *Heterophyes expectans* n. sp., 5 with *Monorchotrema* sp., 3 with *Diorchitrema* sp., and 2 with *Stictodora manilensis* n. sp. From autopsies on native Filipinos *Heterophyes brevicaeca* n. sp., *Monorchotrema taichui* and *Diorchitrema pseudocirrata* were recovered. The authors criticize Witenberg's table of homologous rows. R.T.L.

(284b) Two new heterophyids are described from the small intestine of Philippine dogs. *Monorchotrema calderoni* n. sp. is related most nearly to *M. microrchia*; *Apophallus eccentricus* n. sp. is differentiated from *A. muhlingi* and *A. crami*. R.T.L.

(284c) A Diphyllobothrid tapeworm, identified as *D. latum*, is reported from a native Filipino child who died with clinical symptoms of pernicious anaemia. Garcia & Africa give reasons for their belief that the infection has recently become endemic in the Philippines and has been introduced from China or Japan. R.T.L.

285—Plant Disease Reporter.

a. ANDERSON, P. J., BEACH, W. S., CLAYTON, E. E., GAINES, J. G., HENDERSON, R. J., JOHNSON, J. & MILLER, P. R.—" Tobacco plant bed diseases in 1935." XIX (11), 192-194. [1935.]
b. MILLER, J. H.—" Cereal diseases in Northern Georgia." XIX (13), 221-224. [1935.]

(285a) Root-knot (*Heterodera marioni*) was commonly observed in Georgia in tobacco plant beds, particularly late in the season and in old beds and hot beds. M.J.T.

(285b) Miller reports that at one farm in Franklin County a sample of wheat showed 40% galls caused by the " cockle " eelworm, *Anguillulina tritici*. T.G.

286—Plant Disease Reporter. Supplement.

a. HUMPHREY, H. B. & WOOD, J. I.—" Diseases of plants in the United States in 1933." No. 86, 107 pp. [1935.]
b. WOOD, J. I.—" Estimates of crop losses from diseases in the United States—1931, 1932 and 1933." No. 87, 82 pp. [1935.]

(286a) Humphrey & Wood have compiled records of the incidence of disease in crops throughout the United States during 1933. These are mainly of fungal and bacterial origin but there are many records of disease due to parasitic nematodes with particulars as to economic importance and severity of attack. T.G.

(286b) Wood has tabulated estimates of crop losses by various diseases in the United States for 1931, 1932 and 1933. Under cotton and strawberry losses due to nematodes, namely root-knot and dwarf respectively, are included. T.G.

287—Policlinico (Sezione Chirurgica).

a. PAGGI, B.—" Cisti da echinococco del fegato aperte nelle vie biliari. (Contributo clinico)." XLII (3), 148-162. [1935.]

(287a) [Liver hydatid communicating with bile ducts.]

288—Poultry Science.

a. ACKERT, J. E. & GRAHAM, G. L.—" The efficacy of carbon tetrachloride in roundworm control." XIV (4), 228-231. [1935.]

(288a) Ackert & Graham have used CCl_4 in gelatin capsules for the removal of *Ascaridia lineata* in chickens. A dose of 4 cc. per kilo body weight was an effective anthelmintic and had no toxic effects, but a dose of 10 cc. per kilo body weight caused a mortality of 25% of the chickens. The administration of the drug caused a reduction of egg production. P.A.C.

289—Practitioner.

a. ALLEN, F. M. B.—" Intestinal parasites." CXXXIV (802), 502-512. [1935.]

290—Prensa Médica Argentina.

a. ROMANO, N., MAGGI, A. & DERQUI, M. M.—" Quiste hidático de la base del pulmón derecho. Consideraciones acerca de las dificultades de su diagnóstico." XXII (5), 209-214. [1935.]
b. GREENWAY, D.—" Consideraciones sobre diagnóstico, pronóstico, tratamiento y profilaxis de la helmintiasis intestinal." XXII (13), Supplement, pp. 233-240; (14), Supplement, pp. 241-242. [1935.]

291—Presse Médicale.

a. COSTANTINI, H. & CURTILLET, E.—" Diagnostic radiologique des kystes hydatiques suppurés du poumon." XLIII (8), 150-152. [1935.]

b. LIAN, C. & ODINET, J.—" Le signe de l'écho hydatique ; sa valeur diagnostique." XLIII (10), 177-178. [1925.]
c. DESCHIENS, R.—" Crises épileptiques périodiques dans un cas d'oxyurose chez le chimpanzé." XLIII (21), 404-405. [1935.]
d. HO-DAC-DI & HUYNH-TIEN-DOI.—" A propos d'un cas d'occlusion intestinale causée par 1000 Ascaris dont 700 ont été retirés par entérotomie suivie de guérison." XLIII (31), 629-630. [1935.]

292—Proceedings of the Academy of Sciences (United Provinces of Agra and Oudh, India).

a. SRIVASTAVA, H. D.—" Studies on the family Heterophidae Odhner, 1914. Part I. On a new distome from the Indian Fishing Eagle–*Haliaeetus leucoryphus*—with remarks on the genera *Ascocotyle* Looss, 1899, and *Phagicola* Faust, 1920." IV (3), 269-278. [1935.]
b. SRIVASTAVA, H. D.—" On a new species of *Catatropis* Odhner, 1905, from an Indian fowl—*Gallus bankiva murghi*." IV (3), 283-286. [1935.]
c. KHAN, M. H.—" On eight new species of the genus *Cyclocoelum* Brandes from North Indian snipes." IV (4), 342-368. [1935.]
d. PANDE, B. P.—" Contributions to the digenetic trematodes of the Microchiroptera of Northern India. Part I. New species of the genus *Pycnoporus* Looss with a note on *Anchitrema* Looss." IV (4), 371-379. [1935.]
e. SRIVASTAVA, H. D.—" New Hemiurids (Trematoda) from Indian freshwater fishes. Part I. New distomes of the genus *Lecithaster* Luhe, 1901, from *Clupea ilisha*." IV (4), 381-386. [1935.]
f. MIRZA, M. B.—" *Physaloptera achari* n. sp. from *Calotes versilcolor* with a short note on abnormalities in the genus *Physaloptera*." V (1), 71-74. [1935.]
g. SRIVASTAVA, H. D.—" Studies on the family Heterophyidae Odhner, 1911. Part II. Four new parasites of the genus *Haplorchis* Looss, 1899, from Indian fresh-water fishes with a revision of the genus." V (1), 75-85. [1935.]
h. PANDE, B. P.—" Contributions to the digenetic trematodes of the Microchiroptera of Northern India. Part II. Studies on the genus *Lecithodendrium* Looss." V (1), 86-98. [1935.]
i. MEHRA, H. R.—" New trematodes of the family Lecithodendriidae Odhner, 1911, with a discussion on the classification of the family." V (1), 99-121. [1935.]

(292a) Srivastava describes *Ascocotyle* (*Phagicola*) *intermedius* n. sp. a heterophyd parasite of the Indian Fishing-eagle *Haliaeetus leucoryphus*. This form resembles *Ascocotyle* in the arrangement of the oral spines and the extent of the vitellaria but the presence of a long oesophagus and long intestinal caeca make it necessary to assign it to the sub-genus *Phagicola*. A diagnosis of the genus *Ascocotyle* with a key to its sub-genera and species is given. P.A.C.

(292b) Srivastava describes *Catatropis indicus* n. sp. distinguished from other trematodes of the genus by the position of its genital pore immediately behind the oral sucker. The worms were found in the enlarged rectal caeca of an Indian fowl which had died after prolonged sickness. There was also present a heavy infestation with the tapeworms *Amoebotaenia sphenoides* Railliet 1892 and *Raillietina* (*Fuhrmanella*) *echinobothrida* Megnin, 1800. E.M.S.

(292c) Khan follows the simplified classification of Joyeux & Baer, thus using the name *Cyclocoelum* in the broad sense. His new species are : *C. nebularium*, *C. straightum*, *C. indicum* and *C. lobatum* from *Glottis nebularia* ; *C. capellum* and *C. mehrii* from *Capella gallinago gallinago* ; and *C.*

allahabadi and *C. erythropis* from *Tringa erythropus*. He gives a key to these species and tabulates the characters of four groups of *Cyclocoelum* species for comparison with six of the new forms. E.M.S.

(292d) Pande describes *Pycnoporus loossii* n. sp., and *P. indicus* n. sp., from *Nycticejus dormeri*. He gives a key to the seven species of the genus. He records also *Anchitrema sanguineum* (Sonsino 1894) from new hosts, *Nycticejus dormeri* and *N. kuhli*. He suggests the transfer of *Platynosomum philipinoromum* [*philippinorum*] Tubangui 1928 to the genus *Anchitrema*. E.M.S.

(292e) Srivastava describes *Lecithaster indicus* n. sp., and *L. extralobus* n. sp., both from *Clupea ilisha*. E.M.S.

(292f) *Physaloptera achari* n. sp., differs from those of Australian lizards in the origin of the uteri, the arrangement of the ventral papillae and the structure of the lips. Mirza describes abnormalities of the ventral papillae in *P. paradoxa* (to be re-described later), and also in *Physaloptera* sp. (Mirza, 1934) from *Varanus indicus*. E.M.S.

(292g) Srivastava describes from Indian fish 4 new species of the genus *Haplorchis*, of the family Heterophyidae. *H. attenuatum* carries a large number of radially arranged spines in the gonotyl. *H. piscicola* differs from other species by the shortness of the prepharynx, oesophagus and vesicula seminalis. *H. gangeticum* is characterized mainly by the absence of oesophagus and the distribution of the vitellaria which fail to meet mesially in front of the testes, while the rare *H. silundii* can readily be distinguished by the caudad position of the intestinal bifurcation and genitalia. P.A.C.

(292h) Pande describes *Lecithodendrium loossii* n. sp., *L. mehrai* n. sp., *L. bhaleraoi* n. sp., and *L. longiforme* var. *allahabadi* n. var. from insectivorous bats near Allahabad. He considers that *Acanthatrium* Faust and *Prosthodendrium* Dollfus are synonymous with *Lecithodendrium*. He gives a key to the 20 species of the genus as he conceives it. P.A.C.

(292i) Mehra describes *Exotidendrium gharialii* n. g., n. sp., from *Gavialis gangeticus*, and also *Eumegacetes artamii* n. sp., and *E. braunii* n. sp. from *Artamus fuscus*, with a key to the species of *Eumegacetes*. He discusses fully the classification of the Lecithodendriidae, and creates the following new names : Anchitreminae n. subf., Eumegacetinae n. subf., Phaneropsolinae n. subf., Exotidendriinae n. subf. ; *Lecithoporus* n. g. (for *Pycnoporus inversus* Looss 1907, *P. microlaimus* Linst. 1894 and *P. indicus* Pande 1935) ; and *Pleuropsolus* n. g. (Pleurogenetinae, for *Phaneropsolus insolens* Bhalerao, 1926). E.M.S.

293—Proceedings of the American Society for Horticultural Science for 1934.

a. TUFTS, W. P. & DAY, L. H.—" Nematode resistance of certain deciduous fruit tree seedlings." XXXI, (Supplementary volume), pp. 75-82. [1935.]

(293a) Tufts & Day report on the resistance to *H. marioni* shown by peach, nectarine, apricot, plum, cherry, pear, quince, apple, walnut and almond seedlings.

Tabulated results of tests showing the degree of resistance of 169 peach, 44 nectarine, 26 plum and 23 almond variety seedlings are given. Although these tests have shown that complete immunity appears to exist in some varieties and in individual plants of other varieties it is pointed out that immunity may not be maintained towards other nematode populations and under other circumstances of cultivation. The root-stock and other values of varieties which show high degrees of resistance are discussed. M.J.T.

294—Proceedings of the Indian Academy of Sciences. Section B.

a. CHAUDHURI, H.—" A bacterial disease of wheat in the Punjab." I (10), 579-585. [1935.]
b. SINHA, BIPIN BIHARI.—" Morphology of a new genus of trematode, family Aspidogastridae Poche, 1907, from the intestine of a tortoise, *Lissemys punctata*, together with a key for the identification of the known genera." I (11), 677-685. [1935.]
c. PATWARDHAN, S. S.—" Three new species of trematodes from birds." II (1), 21-28. [1935.]
d. KULKARNI, R. B.—" A second species of *Procamallanus* Baylis 1923 from India." II (1), 29-32. [1935.]
e. THAPAR, G. S. & LAL, M. B.—" On the morphology of a new genus of trematode parasite of the kingfisher from Lucknow." II (1), 88-94. [1935.]

(294a) Chaudhuri shows by experimental inoculations that *Tylenchus scandens* is not essential for the production of ear cockle in wheat which has been reported as due to the inoculation of the bacteria *Ps. tritici* by this nematode. Whereas in ear cockle infection always takes place in the soil, usually at germination, the bacterial disease may result from infection at any stage of growth of the plant. R.T.L.

(294b) *Lissemysia indica* n. g., n. sp. is described from the Indian tortoise *Lissemys punctata*. The genus falls into the group, which comprises *Cotylaspis* and *Cotylogaster*, with three rows of alveoli on the adhesive disc but is distinguished by the absence of a cirrus sac. A key is given for the 8 genera of the family Aspidogastridae Poche 1907. R.T.L.

(294c) *Lyperosomum colorosum* n. sp. from the gall bladder of a black-headed Maina *Temenuchus pagodarum*; *Proalaria alcedensis* n. sp. from the intestine of a king-fisher *Alcedo atthis* and *Neodiplostomum tytense* n. sp. from the intestine of *Tyto alba stertens* are described from Nagpur, C.P., India. R.T.L.

(294d) To the nine species of *Procamallanus* the author adds *P. planoratus* from the Indian siluroid fish *Clarias batrachus*. *P. mehrii* is the only species hitherto recorded from India. R.T.L.

(294e) A new genus of Psilostomidae named *Psilorchis* is based on *P. indicus* from a king-fisher in Lucknow. *Testifrondosa* is transferred from Psilostomidae to Allocreadiidae owing to the presence of a receptaculum seminis, the position of the ovary in front of the testes and the location of the uterus between ovary and ventral sucker. R.T.L.

295—Proceedings of the Zoological Society of London.

a. REES, F. G.—" Two new species of *Tachygonetria* from the Indian tortoise, *Testudo horsfieldi* Gray." Part III, 599-603. [1935.]

b. DAVIES, T. I.—" The anatomy of *Dilepis undula* (Schrank, 1788)." Part III, 717-722. [1935.]

(295a) From the caecum of the Indian tortoise *Testudo horsfieldi* Miss Rees describes *Tachygonetria expansa* n. sp. and *T. torticollis* n. sp., but is doubtful if the former is correctly placed in this genus. R.T.L.

(295b) Davies redescribes *Dilepis undula* (Schrank, 1788) parasitic in the intestine of various birds. On comparing his material with that of Voltz (1900) and Rosseter (1906) he finds it to agree with the former description with a few minor differences, the dextral position of the genital pores being most striking. E.M.S.

296—Progresos de la Clínica.

a. CALVO MELENDRO, J.—" La curación por vómica en los quistes hidatídicos grandes, superficiales y supurados." XLIII (1), 3-13. [1935.]
b. OUTEIRIÑO NUÑEZ, J.—" Investigaciones sobre las reacciones de Weinberg y Casoni, aplicadas al diagnóstico de la hidatidosis." XLIII (1), 31-48. [1935.]

(296b) Nuñez has investigated the efficiency of the Weinberg and Casoni reactions in the diagnosis of hydatid, using alcoholic extracts of intestinal taenias. He finds these reactions are not specific for hydatid for positive results were obtained in infestations of intestinal taenias. However, in clinical practice they are useful provided the absence of enteric taenias is first established. He thinks that there exist antigenic properties common to very different species of taenia. P.A.C.

297—Puerto Rico Journal of Public Health and Tropical Medicine.

a. MOLINA, R. R.—" Treatment of the anaemia associated with hookworm disease." XI (1), 49-55. [1935.]
b. NAIR, P. K.—" An epidemiological study of ascaris, trichuris and hookworm in a coastal village in Puerto Rico." XI (1), 118-138. [1935.]

(297a) Observations on five carefully selected cases of advanced hookworm disease suggest that large doses (6gm.) of iron as ferric ammonium citrate, and a well-balanced and nutritious diet aided by an effective anthelmintic provide the optimum conditions for a rapid recovery from the chronic anaemia encountered in hookworm disease. R.T.L.

298—Queensland Agricultural Journal.

a. ROBERTS, F. H. S.—" Helminth parasites of domesticated animals in Queensland. Further records of occurrence." XLIV (3), 299-300. [1935.]

(298a) Roberts supplements his 1934 check list of helminths of domesticated animals in Queensland adding one species for the pigeon, one for fowl, ten for sheep and six for rabbit. *Trichostrongylus colubriformis* and *T. vitrinus* occurred in wild rabbits as well as in sheep. R.T.L.

299—Revista de Cirugía de Barcelona.

a. PYTEL, A.—" Sobre una forma rara de la apendicitis por vermes." IX (49), 35-41. [1935.]

300—Revista de Gynecologia e d'Obstetricia.

a. CASTRO ROSA, C. DE—" A proposito de um caso de ascaridose aberrante." XXIX, 76-79. [1935.]

301—Revista Medica de Pernambuco.

a. LINS, M. & WANDERLEY, F.—" Geografia medica da esquistosomose em Pernambuco." V (2), 43-92. [1935.]

302—Revista Médica del Rosario.

a. DELGADO, R. & REMUÑAN, R.—" Hidatidosis muscular." XXV, 51-54. [1935.]

303—Revue de Chirurgie, Paris.

a. DELAYE.—" A propos des kystes hydatiques pulmonaires : diagnostic et traitement." LIV (2), 147-157. [1935.]

304—Riforma Medica.

a. SCUDERI, G.—" Tensione superficiale del siero di sangue e velocità di sedimentazione dei globuli rossi." LI (4), 133-137. [1935.]

(304a) [Surface tension of serum and sedimentation rate of red cells.]

305—Rinascenza Medica.

a. MORQUIO, L.—" Pneumotorace idatideo." XII, 75-76. [1935.]

306—Rivista Sanitaria Siciliana.

a. SCADUTO, P.—" Alcuni animali da cortile ed i passeri quali vettori della diffusione a distanza delle uova di *Ankylostoma duodenalis*." XXIII (8), 597-600, 603-604. [English summary, p. 604.] [1935.]

(306a) This paper on the spread of hookworm eggs by domestic animals was published by Scaduto elsewhere in 1933 [see Helm. Abs., Vol. II, No. 323b], in spite of the date " October 1934 " at the end of the article. B.G.P.

307—Skandinavisk Veterinär-Tidskrift.

a. HJORTLUND, S.—" Fortsatte Undersøgelser over Forekomsten af Trikinen hos Hunde og Katte i København samt en Oversigt over dens Forekomst hos Mennesket og Svinet i Danmark." XXV (8), 501-543. [German summary pp. 536-539 : English summary pp. 539-542.] [1935.]

(307a) The examination by Hjortlund of 192 microscopical preparations from each of 1,000 dogs and cats in Copenhagen failed to reveal Trichinella. This parasite was formerly fairly common in these hosts and its disappearance is ascribed to Trichinella-inspection which has been compulsory since 1910. This service has examined over 6 million pigs in Copenhagen in 25 years and found only 45 infected, 20 of which were from Sweden. No case has occurred in the past 5 years. Data on past human infections are also presented. B.G.P.

308—Taiwan Igakkai Zasshi.

a. UJIIE, N.—"A case of empyema caused by heterotopic parasitism of an *Ascaris lumbricoides*." XXXIV (9), 1390-1395. [In Japanese: English summary 1396-1397.] [1935.]

309—Tidsskrift for Planteavl.

a. ANON.—"Plantesygdomme i Danmark 1934. Oversigt, samlet ved Statens plantepatologiske Forsøg." XL (5), 713-765. [In Danish: English summary pp. 765-766.] [1935.]

(309a) All records of nematode infestations of plants occurring in Denmark in 1934 are noted. *Heterodera schachtii* was found infesting wheat, oats, beet, potatoes and brassicas; *Tylenchus dipsaci* occurred on lucerne, clover and narcissus; chrysanthemums were attacked by *Aphelenchus ritzema-bosi*, and *Heterodera radicicola* was found infesting cabbage and melon cultivated in the open. Hitherto the potato strain of *H. schachtii* had been known to occur only at Slesvig but it was now also recorded from the island of Amager. M.J.T.

310—Tierärztliche Mitteilungen.

a. SCHUCKMANN, W. VON.—Ueber das Vorkommen tierischer Entoparasiten beim Menschen in Deutschland." XVI (29), 339-341. [1935.]

311—Tijdschrift voor Diergeneeskunde.

a. BURGGRAAF, H.—"Bilharziose bij het rund, op de oostkust van Sumatra." LXII (12), 615-622. [1935.]

(311a) *S. spindalis* occurs in zebus on the east coast of Sumatra and nasal granuloma has also been observed there. The possible relationship of the parasite to this condition is not discussed. The parasite is figured and briefly described. A mild infection may be present in clinically healthy animals. A severe case in a bull calf is described clinically and pathologically. H.M.

312—Transactions of the Far Eastern Association of Tropical Medicine (9th Congress).

a. HU, S. M. K. & YEN, C. H.—"Studies on the comparative susceptibility of *Culex pipiens* var. *pallens* Coquillet and *Culex fatigans* Wiedemann to experimental infection with *Wuchereria bancrofti* Cobbold." I, 483-490. [1935.]
b. FENG, L. C.—"Some experiments with mosquitoes and *Microfilaria malayi* in Huchow (Chekiang, China)." I, 491-494. [1935.]
c. VOGEL, H., WU, K. & WATT, J. Y. C.—"Preliminary report on the life history of *Paragonimus* in China." I, 509-517. [1935.]
d. CHEN, W. L. & ROSE, G.—"Untersuchungen ueber die Verbreitung der menschlichen Paragonimiasis im Talbezirk von Landin (Provinz Chekian, Hsien Shaoshing)." I, 519-524. [1935.]
e. ROSE, G. & KOH, T. M.—"Beobachtungen ueber die Fortpflanzung und die Lebensweise der Zwischenwirtschnecke (*Omcomelania hupensis*) von *Schistosoma japonicum* unter Laboratoriumsbedingungen." I, 525-534. [1935.]
f. KHAW, O. K.—"Treatment of Schistosomiasis japonica in rabbits with concentrated Fouadin. (A preliminary report)." I, 535-541. [1935.]
g. OTTO, J. H.—"Clinical pathophysiological and therapeutical aspects of human Clonorchiasis." I, 543-561. [1935.]

h. YOUNG, S.—" The blood picture in human Fasciolopsiasis (*F. buski*)." I, 563-566. [1935.]

i. LOUCKS, H. H.—" Hydatid disease in China." I, 567-571. [1935.]

j. KU, D. Y. & KAO, Z. M.—" Some histological observations on Filariasis bancrofti." I, 573-585. [1935.]

k. MINAMIZAKI, Y.—" A study of the viability of hookworms in the intestine." I, 587-588. [1935.]

l. KOIDZUMI, M.—" Studies on the toxic actions of the coelomic fluid of ascaris." I, 589-599. [1935.]

m. OHIRA, T.—" On the active immunization of animals against tape worms." I, 601-604. [1935.]

n. KU, D. Y.—" Oxyuris infection of the wall of the fallopian tube." I, 605-610. [1935.]

o. KOMIYA, Y., KAWANA, K. & TAO, S.—" Investigations into helminthiasis among Japanese pupils in Shanghai." I, 611-617. [1935.]

p. VOGEL, H.—" Der Entwicklungscyclus von *Opisthorchis felineus*." I, 619-624. [1935.]

q. YOSHIDA, S.—"Contribution to the study on *Gnathostoma spinigerum* Owen 1836, cause of esophageal tumor in the Japanese mink, with special reference to its life history." I, 625-630. [1935.]

r. GEAR, H. S. & PEDERSEN, H.—" Some diseases common to man and animals in China." II, 305-323. [1935.]

s. LI, T. Y. & THOMPSON, H. G.—" Treatment of Schistosomiasis japonica with antimony compounds." II, 325-348. [1935.]

t. TAYLOR, H. W. Y.—" The incidence of certain tropical diseases in Moukden and the surrounding parts of South Manchuria." II, 403-406. [1935.]

u. YAO, Y. T., HSU, S. C. & LING, L. C.—" On the occurrence of intestinal parasites in man in different combinations." II, 531-538. [1935.]

v. YAO, Y. T., HSU, S. C. & LING, L. C.—" Intestinal parasite infestation of primary school children in Nanking." II, 539-549. [1935.]

w. YAO, Y. T. & CHU, H. J.—" Intestinal parasites among the people under suburban conditions in Tangshan, Nanking." II, 551-553. [1935.]

x. YU, T. H., CHU, P. J., WANG, C. & TAO, C. S.—" The prevalence of intestinal parasitic infection among school pupils in Shanghai." II, 555-556. [1935.]

y. HIYEDA, K.—" On the distribution of parasites and parasitic diseases in Manchuria." II, 557-562. [1935.]

z. TAO, S. M.—" The place of parasitology in the medical curriculum in China." II, 563-570. [1935.]

za. LANGEN, C. D. DE—" The influence of food on blood regeneration and blood diseases." II, 593-604. [1935.]

zb. KUBOTA, S.—" ' Han-Yao.' The Chinese Materia Medica, from which modern medicines have been prepared in Nippon in recent years." II, 639-643. [1935.]

zc. WINFIELD, G. F.—" On the use of *Ascaris lumbricoides* as a public health standard in the study of problems of rural sanitation." II, 791-797. [1935.]

zd. BERCOVITZ, N.—" Tropical diseases in relation to general health in Hainan, China." II, 849-852. [1935.]

ze. GRAY, J. & THOMPSON, H. G.—" Some surgical complications of parasitic diseases." II, 941-949. [1935.]

(312a) In both *Culex pipiens* var. *pallens* and *C. fatigans* the larvae of *F. bancrofti* complete development to the infective stage in about the same time. 91·1% of the former and 94·5% of the latter were found harbouring active infective larvae. The average intensity of infection per mosquito was 14·4 filariae in *C. pipiens* var. *pallens* and 7·3 in *C. fatigans*. R.T.L.

(312b) Feng's experiments show that *Anopheles hyrcanus* var. *sinensis* is probably the most important carrier of *Microfilaria malayi* in the Huchow area, though *Mansonia* (*Mansonioides*) *uniformis* may also participate. B.G.P.

(312c) Vogel, Wu & Watt describe the life-history of *Paragonimus* in China in areas where it is now known to be endemic in man. Three unidentified species of *Melania* were experimentally exposed to infection with miracidia hatched from eggs found in human sputum, but the cercaria has not yet been secured. *Potamon denticulatus* was found naturally infected with metacercariae which developed to adults in dogs. A cat was found to be naturally infected. B.G.P.

(312d) Paragonimiasis is endemic in the upper reaches of river valleys in the Landin district (Chekiang). Chen & Rose have found 134 persons infected out of 685 examined. They believe the infection to be much more widespread, although it is absent (or at most very rare) in Hangchow where the same methods of eating fresh-water crabs obtain. B.G.P.

(312e) As a result of keeping *Oncomelania hupensis* under experimental observation, Rose & Koh are able to present various data on its habits. Their conjecture, from circumstantial evidence, that this mollusc (unlike its near relatives) is oviparous, is supported in the appended discussion by Vogel from direct observation. The egg-nests are very small and contain very few small eggs. It is shown that *Oncomelania* is alternately aquatic and terrestrial at successive seasons of the year and that there is a period of terrestrial aestivation during drought. B.G.P.

(312f) Testing the efficacy of concentrated Fouadin on *Schistosoma japonicum* in 20 rabbits, Khaw found that 14 of them were essentially cured, whilst 5 died of schistosomiasis aggravated by the treatment. The drug was given intramuscularly. B.G.P.

(312g) Otto's clinical paper on clonorchiasis concludes with a useful bibliography, which is supplementary to that of Faust & Khaw (1927), in addition to the 73 references proper to the present paper. B.G.P.

(312i) Three case-reports of hydatid, one alveolar, in man, are presented by Loucks. The status of the dog in China as a scavenger rather than a pet, and the low economic level of the population which entails the human consumption of most of the viscera of food animals, both militate against the spread of hydatid. B.G.P.

(312k) From an auto-infection with hookworm, Minamizaki concludes that a single infection lasts 7 years. Japanese farmers are infected through working bare-footed on farm land, and not in the paddy fields. B.G.P.

(312l) From the Parasitology Laboratory of the Keio-Gijuku University 43 papers have been issued on the coelomic fluid of Ascaris since 1928. Koidzumi here lists the papers and briefly summarizes the work. B.G.P.

(312m) Ohira concludes that kittens can be partially immunized against *Taenia crassicollis* [*T. taeniaeformis*] by subcutaneous injection, or feeding, or both, of emulsions prepared from the larva, *Cysticercus fasciolaris*. The worms were fewer in number, smaller in size, and slower in maturing, than in the controls. Somewhat similar results were obtained with *Diphyllobothrium latum* in puppies. B.G.P.

(3120) Komiya, Kawana & Tao report, from faecal examinations of 2,500 Japanese pupils in Shanghai, 50% parasitized by the following helminths: Trichuris 37% Ascaris 15%, Hookworms 5% and Clonorchis 3%. B.G.P.

(312p) Vogel gives a brief summary of his work on the life-history of *Opisthorchis felineus* [see Helm. Abs., Vol. III, No. 435a]. B.G.P.

(312q) During 10 years Yoshida has found 47% of 2,473 Japanese mink infected with *Gnathostoma spinigerum*, exclusively in oesophageal tumours. There were no cases of perforation through the wall. The eggs, which start in the 1 or 2-celled stage, embryonate and hatch in water. Species of cyclops act as intermediaries, but it is probable that a second intermediary is necessary since a cat was not infected from infected cyclops. B.G.P.

(312r) Under a section: "Helminthic Conditions," Gear & Pedersen briefly touch on the helminthic forms common to man and animals in China. *Cysticercus cellulosae* and *Taenia solium* are very rare in pig and man respectively, and Trichinella, also very rare in pig, is hitherto not recorded from man; these facts are explained by the thorough cooking of pork. B.G.P.

(312t) Hookworm is the only helminthic disease of man mentioned in Taylor's brief note on the tropical diseases of South Manchuria. B.G.P.

(312u) On the basis of nearly 10,000 faeces examinations in Nanking, Yao & Ling have investigated the "combination ratios" of pairs of parasites in mixed infections. The combination ratio is given by x in the following formula:

$$\frac{\text{Total of species A}}{\text{Total examined}} : \frac{\text{Species A with species B}}{\text{Total of species B}} = 1 : x.$$

This value indicates that the incidence of the combination of two parasites is x times as great as the normal incidence of either of them, so that where x is large (say, 5 or more) the association is not likely to be due to chance. In the present case, while some of the combinations protozoa with protozoa are apparently not random, most of the combinations helminths with helminths and helminths with protozoa appear to be so. Thus, while Ascaris and Trichuris are very frequently found in the same host, this combination is no more frequent than it would be in a random distribution, the combination ratio being 1·1. B.G.P.

(312y) While the more important parasitic diseases of Manchuria are protozoal, Hiyeda finds hookworm abundant in the south and tapeworm in the north. Thread-worm is present in 17% of Manchurian school children. B.G.P.

(312z) Tao suggests that an error has been made in basing the medical curriculum in China upon that current in Europe and America, where tropical diseases are rare. The curriculum is already overburdened, and a place for parasitology should be found at the expense of other subjects of less local importance. B.G.P.

(312za) Developing his thesis that anaemias of the hookworm type are primarily due to food deficiencies [see Helm. Abs., Vol. II, No. 186a], de Langen points out that such anaemias are usually *macrocytic* and hypochromic. Formerly, macrocytosis suggested pernicious anaemia, but this is not seen in Java. B.G.P.

(312zb) From the Chinese *Materia Medica* Kubota draws attention to two ascaricides : *Digenia simplex*, an alga now used in " Macnin " and other trade anthelmintics, and *Xanthoxylum schiniifolia*, the essential oil of which has given results against ascaris *in vitro* equal to chenopodium oil. B.G.P.

(312zc) Ascaris forms a useful index of pollution in the study and control of faeces-borne diseases, according to Winfield. In education it has the advantages of being easily visible and well known, and of having a simply explained life-history. In laboratory work the eggs are easily seen and counted, and their viability can be used as a criterion in experimental studies on faeces disposal. Finally, the changing incidence of the worm in a population will indicate the degree of success of any sanitary system under test. B.G.P.

(312zd) Hookworm and Ascaris infections are among the tropical diseases which Bercovitz considers important in Hainan, the former especially in pregnant women and the latter especially in children. B.G.P.

(312ze) Gray & Thompson consider surgical complications that may occur in various forms of Filariasis (Chyluria, Hydrocele and elephantiasis) and in Schistosomiasis japonica. B.G.P.

313—Ugeskrift for Laeger.

a. HARPØTH, H.—[Intestinal obstruction in child caused by ascarides.] XCVII 80-83. [1935.]

314—Veterinary Journal.

a. TAGG, J.—" Filaria in aqueous humour of the horse's eye." XCI (9), 399-400. [1935.]

(314a) The operative procedure carried out in over 100 cases by the author is described. R.T.L.

315—Veterinary Medicine.

a. WRIGHT, W. H.—" Prevention and treatment of parasites of large domestic animals." XXX (7), 307-311. [1935.]

b. WRIGHT, W. H.—" The treatment of dogs and cats infested with internal parasites." XXX (7), 312-315. [1935.]

316—Virginia Medical Monthly.

a. HALL, M. C.—" Parasitology in relation to public health." LXI (10), 588-594. [1935.]

317—West African Medical Journal.

a. RAMSAY, G. W. ST. C.—" A study on schistosomiasis and certain other helminthic infections in Northern Nigeria. IV. The influence of age on the excretion of eggs of *Bilharzia* spp. and of *Hymenolepis nana*." [Conclusion.] VIII (3), 2-7. [1935.]

(317a) Continuing his report on a survey in Northern Nigeria [see Helm. Abs., Vol. III, No. 426b], Ramsay finds that Bilharzia disease is rampant throughout the colony, the vesical form being the most common. *Necator*

americanus and *Taenia saginata* are also very common. Schistosomiasis cannot be satisfactorily diagnosed by means of the skin tests which should be used in conjunction with faecal examinations. The intermediate hosts in the colony have been ascertained.

Judging from the number of eggs of *Bilharzia* spp. and onchospheres of *Hymenolepis nana*, excreted in the faeces of a large number of individuals of all ages, he is of the opinion that the incidence of these infestations increases rapidly to a maximum in childhood, after which there is a steady decline. It is said locally that all children suffer at some time from an intense haematuria. This decline seems to be in accordance with some natural law and may be associated with the density of the parasite population within the host. P.A.C.

318—Zeitschrift für Fleisch- und Milchhygiene.

a. KOLBE, F.—" Neueres über die Trichine, II." XLV (21), 405-408; (22), 427-430. [1935.]
b. KRUEGER—" Weiteres über die Finnenfrage." XLV (23), 441-443. [1935.]

(318a) Kolbe gives a condensed review of work published on trichinella since his earlier review in 1931. The data are presented under the headings : Biology, Susceptibility of experimental animals, Incidence and intensity, Resistance to external factors, Epidemiology, Diagnosis, Therapeutics, and Trichina-inspection (Meat inspection). B.G.P.

(318b) In the Cottbus area, Krueger finds that grass from irrigated meadows is twice as effective in spreading *Cysticercus bovis* to cattle as other green fodder. While living cysts may be found in cattle 10 years old, they are commoner in young cattle, and twice as numerous in bulls as in cows. Only 3% of infected cattle are heavily infected. The muscles of election are the masseters, tongue and diaphragm ; the heart only in 10% of cases. B.G.P.

319—Zeitschrift für die Gesamte Experimentelle Medizin.

a. SINGER, K.—" Experimentelle Beiträge zum Problem der Pathogenese der perniziösen Anämie. II. Mitteilung. Zur Kenntnis der Anämien bei künstlich mit *Bothriocephalus latus* infizierten agastrischen Hunden sowie der Sekretionsverhältnisse des Castleschen Prinzips bei dieser Tierart." XCV, 762-771. [1935.]

(319a) Singer has unsuccessfully attempted to produce Pernicious Anaemia in dogs by resection of the stomach followed by artificial infection with *Dibothriocephalus latus*. A hyperchromic anaemia was produced, but it was not megalocytic, and the bone marrow was not typical of P.A. A subsequent experiment suggested that in dogs the stomach is not the source of the intrinsic factor in the Castle (anti-P.A.) principle. B.G.P.

320—Zeitschrift für Morphologie und Ökologie der Tiere.

a. SCHUURMANS STEKHOVEN, JR., J. H., ADAM, W. & PUNT, A.—" Ökologische Notizen über Zuiderseenematoden. II. Die Nematoden der östlichen Hälfte der Zuidersee nebst Beobachtungen über die Aussüszung der Zuidersee nach deren Eindeichung. (Mitteilung der Zuidersee Kommission)." XXIX (5), 609-666. [1935.]

(320a) Schuurmans Stekhoven, Adam & Punt give a very detailed account of an oecological survey of the nematodes of the eastern part of the Zuidersee, particularly in relation to changes in its salinity which has gradually been altering as a result of the damming of its northern end.

The nematode fauna is now mainly that characteristic of brackish waters. The writers conclude that if for many species present the conditions for optimal development are relatively narrow, these species can tolerate great variations in the salt content of their environment. T.G.

321—Zeitschrift für Parasitenkunde.

a. HEINZE, K.—" Über das Genus *Parachordodes* Camerano 1897 nebst allgemeinen Angaben über die Familie Chordodidae." VII (6), 657-678. [1935.]

b. DENECKE, K.—" Nematodenlarven der Gattung *Goezia* als Ursache eines Aalsterbens." VII (6), 702-708. [1935.]

c. HOBMAIER, M. & HOBMAIER, A.—" Zur Entwicklung des Lungenwurmes der Katze *Aelurostrongylus abstrusus*." VII (6), 717-718. [1935.]

d. HSÜ, H. F.—" Über das Exkretionssystem von *Rossicotrema donicum* Skrjabin, 1919 (Trematoda)." VIII (1), 116-120. [1935.]

e. SRIVASTAVA, H. D.—" New hemiurids (Trematoda) from Indian freshwater fishes. Part II. A rare parasite of the sub-family Dinurinae (Looss 1907) from *Clupea ilisha*." VIII (1), 135-138. [1935.]

(321a) Heinze classifies the Gordiid family Chordodidae into the four new subfamilies Chordodinae, Chordodiolinae, Parachordodinae and Paragordiinae; each is defined. Dealing with the Parachordodinae, the author divides this new subfamily into 4 genera, *Chordodes*, *Paragordionus* n. g., *Parachordodes* and *Gordionus*; he considers the position of *Beatogordius* and *Paragordius* doubtful, the former being the more primitive of the two. The described species of this subfamily are assigned to the various recognized genera and the distribution of the forms, so far as is known, mentioned; their relationships are also discussed. Descriptions of the species belonging to the genera *Parachordodes*, including *P. arndti* n. sp. and *P. propareolatus* n. sp. (mentioned on p. 661 as *P. densareolatus* n. sp. but given as *P. propareolatus* on pp. 672-674), and *Paragordionus* are given. J.N.O.

(321b) Denecke finds a larval *Goezia* species to be the cause of death in an epidemic among eels, *Anguilla anguilla*, of the Lower Elbe. The larvae are coiled within concentric cysts, and are extremely numerous in the submucosa of the stomach, but are found in all layers and in many other parts of the body cavity. Death is attributed to thickening of the submucosa consequent upon the invasion by the larvae. He speculates on the possible course of the life cycle, which may be direct as in *Ascaris lumbricoides*, or may be completed in a predatory fish or higher vetrebrate. The eel is probably not a normal intermediate host, as host and parasite are poorly adapted to one another, many of the larvae being found dead within the cysts. E.M.S.

(321c) M. & A. Hobmaier claim that the development of *Aelurostrongylus abstrusus* to the infective stage takes place in various species of molluscs and that the mouse can act only as a storage host for the parasite.

Five different species of immature nematodes have been observed by the authors in rodents and they consider, therefore, that Cameron is hardly

justified in his conclusion that the larvae found by him in mice are the same as those recorded by Leuckart or that these larvae are stages in the life-cycle of *Ae. abstrusus*. D.O.M.

(321d) Hsü has worked out the flame-cell plan of *Rossicotrema donicum* and finds it to be distinct from those of *Heterophyes heterophyes* and *Cryptocotyle lingua*, although the distribution of collecting tubules is the same. He concludes that flame-cell pattern should not be used as a criterion of the Heterophyids. E.M.S.

(321e) Srivastava describes *Clupenurus piscicola* n.g., n.sp., type of a new genus of Dinurinae, intermediate in position between the genera *Dinurus*, *Ectenurus* and *Lecithocladium*. Only two specimens, one immature, were found. E.M.S.

322—Zeitschrift für Veterinärkunde.

a. SEEHAWER.—" Der heutige Stand der Erforschung und Bekämpfung der Magen- und Darmparasiten des Pferdes." XLVII (8), 257-273. [1935.]

(322a) Seehawer discusses prophylactic measures based on the biology of equine gastro-intestinal parasites as advocated by various authors. He describes the use of the anthelmintics recently used by himself and various writers, with special reference to tartar emetic and carbon tetrachloride in the case of strongyles and carbon bisulphide for gastrophilus larvae. J.W.G.L.

323—Zentralblatt für Bakteriologie. Abteilung I. Originale.

a. TRAWINSKI, A. & ROTHFELD, J.—" Ueber Anwendung der Präzipitationsreaktion zum Nachweis der Gehirnzystizerkose beim Menschen." CXXXIV (7/8), 472-474. [1935.]

(323a) Trawinski & Rothfeld describe 4 patients, 3 of whom were epileptics, in which the clinical symptoms were suggestive of cerebral cysticercosis. In all the precipitin reaction, with the specific antigen, gave positive results. Later the diagnosis was confirmed in 2 cases. Sections of the brain showed cysticerci in one case and in the other the larva was excised from certain muscles just under the skin. P.A.C.

324—Zentralblatt für Chirurgie.

a. SZABÓ, K.—" Über den Askaris-Ileus." LXII (12), 691-693. [1935.]

325—Zoogeographica.

a. ÖKLAND, F.—" *Limnaea truncatula* regulating the occurrence of *Fasciola hepatica* in Norway." III (1), 16-26. [1935.]

(325a) Liver fluke and *Limnaea truncatula* are both widely disseminated in Norway but the parasite is unevenly distributed. In the western regions it extends to the sea board and is rare around the inner parts of the narrow fjords. Except in the Gudbrandsdale valley it is unimportant in the long valleys on the east. No correlation exists between fascioliasis and rainfall but there is a striking correlation with the topographical distribution of the quaternary marine clay, which especially favours the intermediate host.

R.T.L.

326—Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere.

a. PATWARDHAN, S. S.—" On two new species of cestodes from a snipe." LXVI (6), 541-548. [1935.]

(326a) Patwardhan describes and figures 2 new cestodes from a " snipe," the actual species being unknown. *Paricterotaenia cirrospinosa* n. sp. differs from all other species of the genus by the possession of only 26 testes in each segment and by the size of the hooks on the rostellum, which measure 0·05 mm. *Choanotaenia manipurensis* n. sp. is characterized by the presence of 16 hooks of 2 sizes arranged in a double ring on the rostellum. The testes number 24 to 28 and the cirrus sac reaches to the longitudinal excretory canal. P.A.C.

NON-PERIODICAL LITERATURE.

327—LŐRINCZ, F., ÁCS, L., CZUKELTER-SZECSŐDY, J., MAKARA, G., STILLER, J. & SZABOLCS, Z.—" Az ancylostomiasis (bányász-aszály) kérdésének mai állása Magyarországon." (The ancylostomiasis problem in Hungary.) Pécs, 90 pp. [In Hungarian: English summary pp. 85-90.] [1935.]

The present position of ancylostomiasis in certain coal mines in Hungary is fully described by Lőrincz with the assistance, for certain chapters, of 5 collaborators. " Miners' Disease " has been known in Hungary since 1770, and a hookworm campaign was started in 1899. By 1910 all the mines were supposed to be free of infection. Of the 70 mines remaining in post-war Hungary, the authors have examined 33, and found the hookworm established in 3, in 5·3%, 7·9% and 75·1% of the miners respectively. The structure, biology and life-history of *Ancylostoma duodenale* are described and an account is given of measures at present adopted for treatment and prevention of the disease. B.G.P.

328—SKRJABIN, K. I. & SCHULTZ, R. E. S.—[Fascioliasis of animals and its control.] Moscow, 170 pp. [In Russian.] [1935.]

This copiously illustrated text-book by Skrjabin & Schultz dealing with fascioliasis in animals proceeds systematically from an account of the morphology of *Fasciola hepatica* and its varieties and *F. gigantica*, through sections on the life history, pathogenesis and pathological anatomy of the disease, its diagnosis and epizootology (including full accounts of the distribution and biology of *Lymnaea truncatula*), to control by treatment and by prophylaxis. It has separate bibliographies of Russian (3 pages) and foreign (13 pages) references. B.G.P.